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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/728,962	12/08/2003	Deborah T. Marr	042390.P7941C	9038
45209	7590	03/05/2008		
INTEL/BLAKELY 1279 OAKMEAD PARKWAY SUNNYVALE, CA 94085-4040			EXAMINER LEE, CHUN KUAN	
			ART UNIT 2181	PAPER NUMBER
			MAIL DATE 03/05/2008	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/728,962

Applicant(s)

MARR ET AL.

Examiner

Chun-Kuan Lee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 November 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 21-26, 28, 29, 32-34 and 36-41 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 21-26, 28, 29, 32-34 and 36-41 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 February 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>See Continuation Sheet</u> . | 6) <input type="checkbox"/> Other: _____ |

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :10/04/2007, 11/05/2007, 11/26/2007 & 01/09/2008.

DETAILED ACTION

CONTINUED EXAMINATION UNDER 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/04/2007 has been entered.

RESPONSE TO ARGUMENTS

2. Applicant's arguments, see pages 6-7, filed 10/04/2007, with respect to claims 21-26, 28-29, 32-34 and 36 have been fully considered and are persuasive. The rejection of claims 21-26, 28-29, 32-34 and 36 has been withdrawn. Currently, claims 1-20, 27, 30-31 and 35 are canceled and claims 21-26, 28-29, 32-34 and 36-41 are pending for examination.

I. ACKNOWLEDGEMENT OF REFERENCES CITED BY APPLICANT

3. As required by **M.P.E.P. 609(C)**, the applicant's submissions of the Information Disclosure Statement dated October, 04, 2007; November, 05, 2007; November, 26, 2007 and January 09, 2008 are acknowledged by the examiner and the cited references have been considered in the examination of the claims now pending. As required by

M.P.E.P 609 C(2), a copy of the PTOL-1449 initialed and dated by the examiner is attached to the instant office action.

II. REJECTIONS BASED ON 35 U.S.C. 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 21-26, 28, 34, 36, 38 and 41 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
5. Claims 21-26, 28-29, 32-34 and 36-41 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential elements, such omission amounting to a gap between the elements. See MPEP § 2172.01.

Claim 26 recites the limitation "the pipeline stage" in line 7. There is insufficient antecedent basis for this limitation in the claim.

Claim 34 recites the limitation "the first instruction" in line 4. There is insufficient antecedent basis for this limitation in the claim.

Claim 41, recites the limitation "the value" in lines 6-7. There is insufficient antecedent basis for this limitation in the claim.

6. As per claim 21, in lines 5-6, it is not to be fully clear to the examiner as to which "instruction" the applicant is referring to. The examiner will assume the claimed limitation of "... A method comprising:

determining whether a first instruction for a first thread is of a first type;
pausing execution of instructions of the first thread upon determining that the first instruction is of the first type while executing instructions from a second thread; and
resuming execution of a second instruction decoded from the first thread after the first instruction for the first thread is retired ..." for the current examination.

7. As per claim 22, in line 2, it is not to be fully clear to the examiner as to which "instruction" the applicant is referring to; the examiner will assume the claim limitation of "... comprising decoding instructions for the first thread into the first instruction and the second instruction ..." for the current examination.

8. As per claim 26, in lines 3-4, it is not to be fully clear to the examiner as to which "instruction" the applicant is referring to;

in line 6, it appears not fully clear to the examiner as to which "value" the applicant is referring to; and

in line 7, it appears not fully clear to the examiner as to which "pipeline stage" the applicant is referring to; the examiner will assume the claimed limitation of "... A method comprising:

determining whether an instruction of a first thread is of a first type;

initiating a counter upon determining that the instruction of the first thread is of the first type, wherein the instruction of the first thread includes an operand and the initiating includes loading the counter with a value of the operand; and

pausing execution of instructions of the first thread until the counter reaches the value of the operand while executing instructions of a second thread at a pipeline stage ...” for the current examination.

9. As per claim 28, in line 2, it is not to be fully clear to the examiner as to which "value" the applicant is referring to; the examiner will assume the claimed limitation of "... comprising resuming executing instructions of the first thread after the counter reaches the value of the operand ..." for the current examination.

10. As per claim 29, the examiner will assume the claimed limitation of "... an apparatus comprising:

a decode unit to determine whether an instruction of a first thread is of a first type, said decode unit to pause execution of instructions of said first thread upon determining that the instruction of the first thread is of the first type by generating a first instruction to cause a value to be stored in a memory for the first thread while instructions from a second thread can be executed, said decode unit further to generate a second instruction of the first thread upon which execution is to resume in response to the retirement of the first instruction ..." for the current examination.

11. As per claim 32, the examiner will assume the claimed limitation of "... wherein the decode unit is to execute the second instruction when the value stored in the memory is reset ..." for the current examination.

12. As per claim 34, in line 4, it is not to be fully clear to the examiner as to which "instruction" the applicant is referring to; and

in line 5, it is not to be fully clear to the examiner as to which "value" the applicant is referring to; the examiner will assume the claimed limitation of "... An apparatus comprising:

a decode unit to determine whether a first instruction for a first thread is of a first type;

a counter coupled to the decode unit, the counter to be loaded with a value of an operand of the first instruction if the first instruction for the first thread is of the first type, the decode unit to pause executing instructions of the first thread until the counter reaches the value of the operand ; and

wherein instructions for a second thread can be executed while instructions of the first thread are paused from being executed ..." for the current examination

13. As per claim 36, the examiner will assume the claimed limitation of "... wherein the decode unit is to operate while the first thread is paused from being executed ..." for the current examination.

14. As per claim 39, the examiner will assume the claimed limitation of "... An apparatus comprising:

a queue; and

a decode unit coupled with the queue to receive and decode a pause instruction of a first thread, the decode unit in response to the pause instruction to pause execution of instructions of the first thread for a period of time while instructions from a second thread are executed, the decode unit in response to the pause instruction to generate a first instruction causing a value that is to be queued in the queue during the period of time, and the decoder unit further to cause the resumption of executing instructions of the first thread in response to the retirement of the first instruction ..." for the current examination.

15. As per claim 40, the examiner will assume the claimed limitation of "... An apparatus comprising:

a decode unit to receive and decode a pause instruction of a first thread, the decode unit in response to the pause instruction to pause execution of instructions of the first thread while instructions from a second thread are executed by generating a first instruction and a second instruction, the first instruction to cause the setting of a flag before being forwarded into a pipeline and the second instruction to prevent instructions of the first thread from being executed until after the resetting of the flag in response to the retirement of the first instruction ..." for the current examination.

16. As per claim 40, it is not fully clear to the examiner as to which "value" the applicant is referring to; the examiner will assume the claimed limitation of "... pause

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instruction stored in one of a memory and a queue that is operable to cause a processor to perform operations comprising:

receiving and decoding the pause instruction;

loading a value of an operand of the pause instruction into a counter;

pausing execution of instructions of a first thread from which the pause

instruction was received while instructions of a second thread are executed until the counter reaches the value of the operand; and

resuming execution of instruction of the first thread in response to retirement of the pause instruction ...”

17. As per claims 23-25 and 37-38, dependent claims 23-25 and 37-38 are also rejected at least due to direct/indirect dependency on the rejected independent claims 22, 32 and 34.

18. Claims 21-26, 28-29, 32-34 and 36-41 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

III. CLOSING COMMENTS

Conclusion

a. STATUS OF CLAIMS IN THE APPLICATION

The following is a summary of the treatment and status of all claims in the application as recommended by M.P.E.P. 707.07(i):

a(1) CLAIMS REJECTED IN THE APPLICATION

Per the instant office action, claims 21-26, 28-29, 32-34 and 36-41 have received a first action on the merits and are subject of a first action non-final.

b. DIRECTION OF FUTURE CORRESPONDENCES

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chun-Kuan (Mike) Lee whose telephone number is (571) 272-0671. The examiner can normally be reached on 8AM to 5PM.

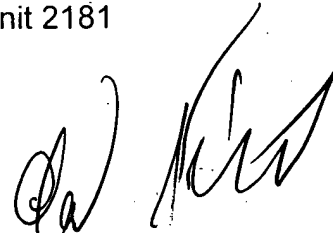
IMPORTANT NOTE

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Alford Kindred can be reached on (571) 272-4037. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

March 03, 2008

Chun-Kuan (Mike) Lee
Examiner
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A handwritten signature in black ink, appearing to read 'Alford Kindred', is written over the printed name.

ALFORD KINDRED
SUPERVISORY PATENT EXAMINER